

Update on EIRA and EIC pilots

June 2015

ISA Programme

ISA Action 2.1 and 2.14 :
European Interoperability Architecture (EIA),
Trans-European Systems (TES)



- 01** Short overview of the pilots
- 02 Short overview of the latest EIRA development version
- 03 Short overview of the identified functionalities of the CarTool
- 04 Evaluation survey of the EIRA and the CarTool (PoC) functionalities
- 05 Next steps
- 06 Closing



We invited 3 MSs and 3 DGs to conduct a pilot of EIRA and CarTool:

- To gain general **insight** and **hands-on experience** with the EIRA and the CarTool (PoC) in their specific environment;
- To work with a **use case** that they selected to maximise the value that they can obtain from their participation in the pilot.
- To collaborate as partners in the **continuous improvement**.

Pilot results

1. Danish e-Health Atlas – solution portfolio.
2. Danish e-Prescription – solution architecture.
3. Change requests and good ideas on EIRA and CarTool (PoC).

Key findings

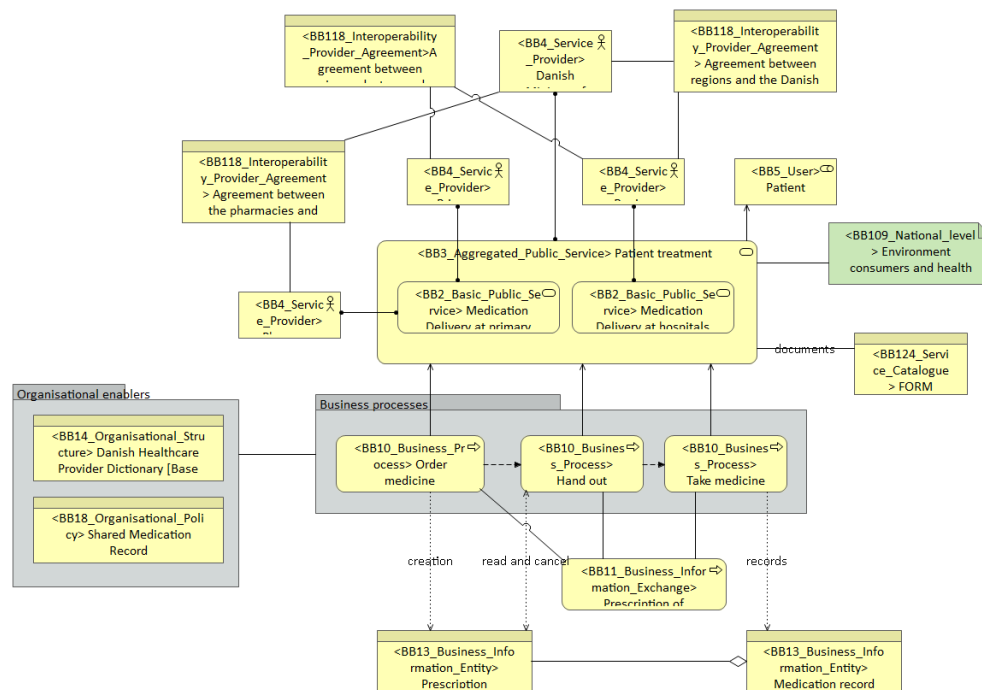
- The pilot illustrates how to use EIRA as an extension of the ArchiMate language using stereotypes.
- The pilot illustrates how a solution portfolio can be constructed.
- Ability to exchange data between Archi and the CarTool (import/export).
- An introductory view or high-level overview depicting all views and their key ABBs is needed.
- It was suggested to use ADMS attributes for better descriptive metadata.
- **The CarTool should support graphical modelling for data capture.**



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**Organisational view solution
architecture
(author: Mr. Mads Hjorth)**

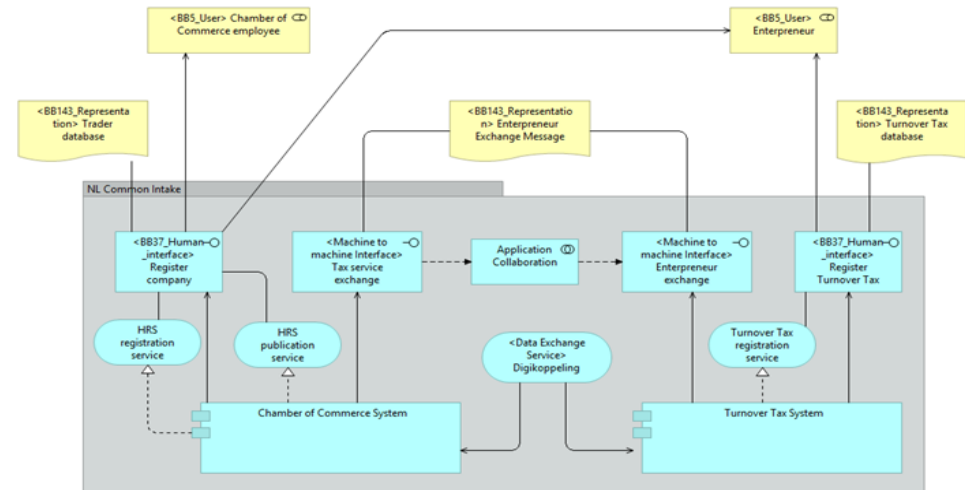
Pilot results

1. Dutch common intake solution architecture.
2. Feedback on the EIRA and functionality of the CarTool (PoC).



Key findings

- The EIRA establishes a richer metamodel on top of Archimate in relation to solution interoperability.
- The EIRA should and can serve to standardise the small part of solutions relating to interoperability.
- It was a good experience modelling and using the EIRA to document solutions in relation to interoperability.
- The CarTool can be very useful as a data mining tool => suggestions for portfolio management.
- Stronger than TOGAF with respect to interoperability.



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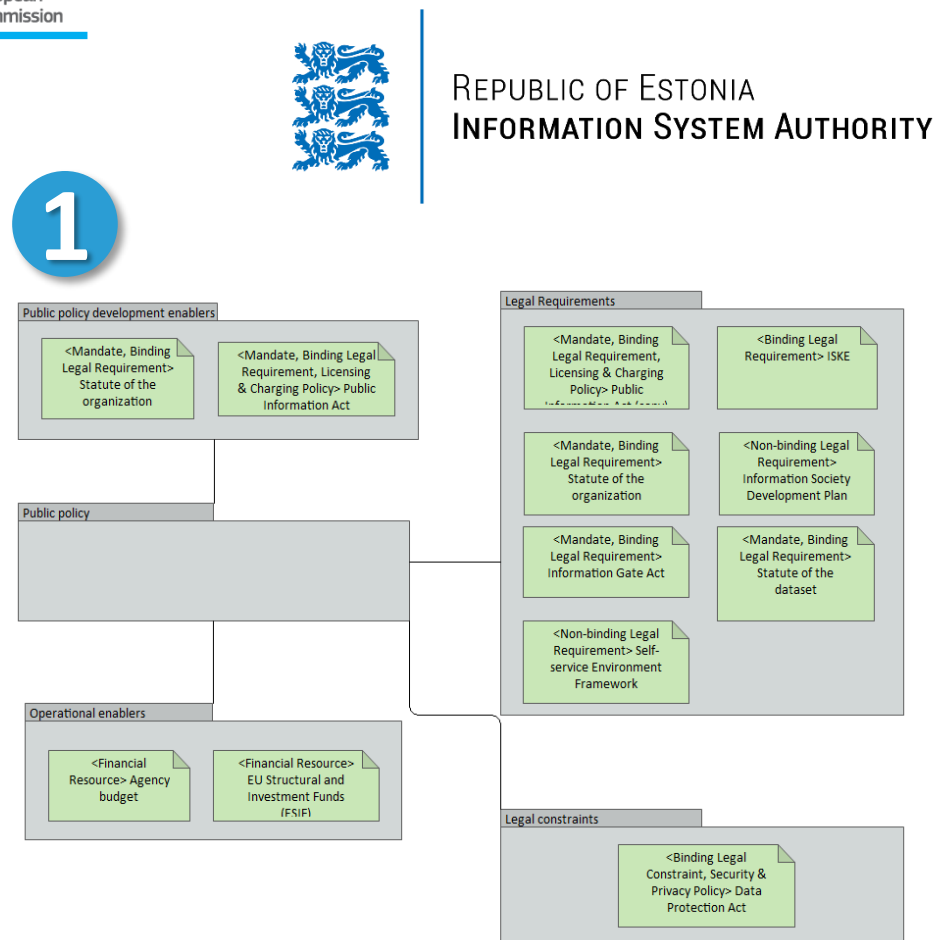
**Dutch common intake solution -
Technical application view
(author: Mr. Saco Bekius)**

Pilot results

1. [eesti.ee solution architecture](#)
2. [Solution architecture template based](#) on Self Service Environment Framework (SSEF) document: SSEF was not documented using EIRA due to the limited IOP aspects of SSEF.
3. [Feedback document](#) on the EIRA and functionality of the CarTool (PoC).

Key findings

- EIRA is a mature and versatile framework for documenting complex interoperability solutions. It provides a solid common vocabulary and allows for systematic approach to interoperability.
- CarTool provides a potentially useful environment for documenting interoperability solutions.
- RFC's have been produced regarding import/export functionalities.



Legal view of the eesti.ee solution architecture
(author: Andres Kütt)

Pilot results

1. Solution documentation in the CarTool:

- e-ID (STORK), e-Signature, e-Document, e-Delivery

2. e-SENS - EIRA alignment:

- Glossary and EIRA vocabulary
- Comparing ISA-EIRA and eSENS Metamodel
- Mapping eSENS-RA and ISA-EIRA
- Convergence and future developments
- <http://wiki.ds.unipi.gr/display/ESENS/Mapping+eSENS-RA+to+ISA-EIRA>

3. Feedback on the EIRA and functionality of the CarTool (PoC).

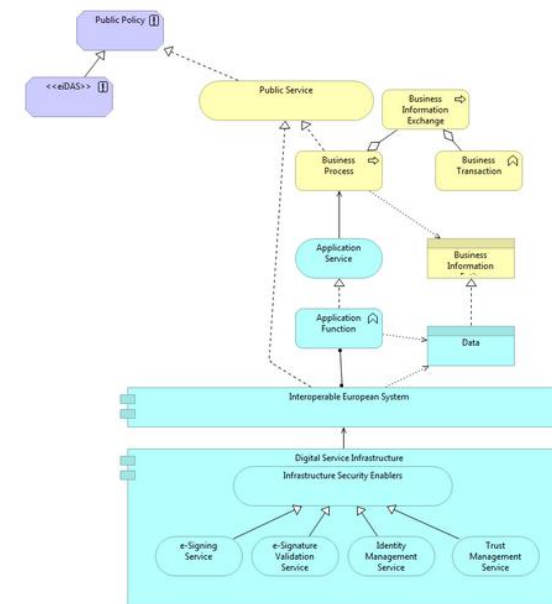
Key findings

- Ability to exchange data between Archi and the CarTool (import/export).
- The EIRA has been used to structure the e-SENS reference architecture.
- EIRA's legal view is not part of e-SENS reference architecture.

Mapping eSENS-RA to ISA-EIRA

ISA-EIRA in a nutshell

The following view is an excerpt of the model representing the most important elements as well as their relations:



The ISA-EIRA main abstraction is the Interoperable European System (IES): an IES is an application component (i.e. an behaviour (Application Function)). It is assumed that the IES might perform multiple functions. Each function is exposed as same time, an IES realizes a Public Service.

An IES is made of enablers, which are application services delivering specific enabling functionalities (testing, data routing low-level (infrastructure) services).

Comparing ISA-EIRA and eSENS Metamodel

Excerpt of the mapping page between eSENS reference architecture and EIRA (author: e-SENS)

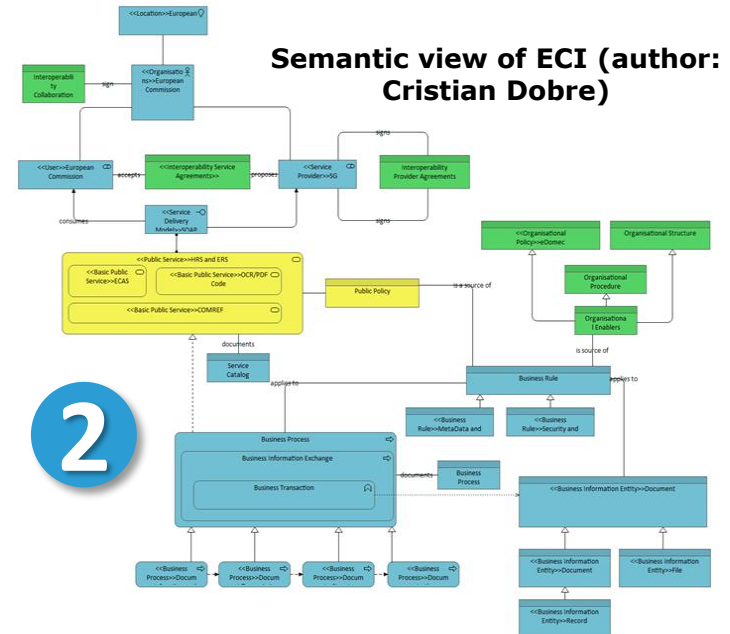
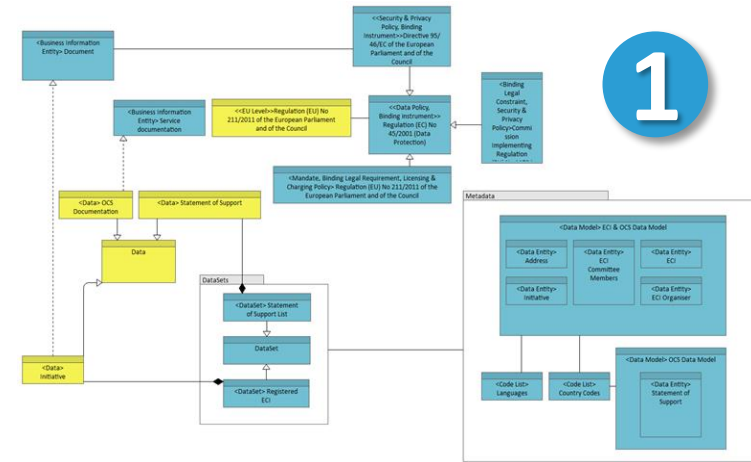


Pilot results

- Solution documentation:
 1. European Citizens Initiative Online Collection
 2. HERMES document management solution
- Feedback on the EIRA and functionality of the CarTool (PoC).

Key findings

- Modelling in Archi was helpful as it helps to think about interoperability in a holistic way.
- The EIRA helped identifying commonalities across solutions.
- The EIRA helped identifying cases for (re)-use.





Pilot results

1. Use of the CarTool (PoC) functionalities for searching for reusable solutions.
2. Feedback on the EIRA and functionality of the CarTool (PoC).

Key findings

- This Cartool initiative has great potential. In its final version it should allow for identifying existing and re-usable software modules and thus prevent useless new developments.
- The level of detail provided by the tool seems insufficient to identify re-usable components that also fit the technology stack that we are working with.

EIRA Overview	Legal View	Organisational View	Semantic View	Technical View - Application	Technical View - Infrastructure
BB158_Identity_Management... BB157_e_archiving_component BB157_e_Archiving_Component BB156_e_archiving_service BB154_Code_List BB153_Public_Hosting_Facility BB153_Cloud_Hosting_Facility BB152_Private_Hosting_Facility BB150_Network_Service BB149_Processing BB148_Storage BB147_Secure_Access BB144_e_Signature_Validation... BB143_Representation BB142_Business_Process_Model BB141_Partner_Management... BB138_Lifecycle_Management... BB137_Administration_and_M... BB136_Document_Managemen... BB135_Data_Routing_Compo...					
BB60 Interoperable Europ...	BB158 Identity Management Component	Att2 BB56 Re...	Att3 BB56 Re...	BB4 Service Provider	
EBR	EBR - Identity Management Component	Reusable	-	EEIG	
EUDRANET	EUDRANET - Identity Management Component	Reusable	-	European Medicines Agency	
CRMS	CRMS - Identity management Component	Reusable	-	DG TAXUD	
SURVEILLANCE 2	SURVEILLANCE 2 - Identity management Component	Reusable	-	DG TAXUD	
epSOS	epSOS - Identity management Component	Reusable	-	DG CONNECT	
Géant	Géant - Identity management Component	Reusable	-	DG CONNECT	
STORK	STORK - Identity management service	Reusable	-	DG CONNECT	
ICSMS	ECAS - Identity management Component	Reusable	Already reused	DG ENTR	
TRIS	ECAS - Identity management Component	Reusable	Already reused	DG ENTR	
e-Prior	ECAS - Identity management Component	Reusable	Already reused	DIGIT	
ECAS	ECAS - Identity management Component	Reusable	Already reused	DIGIT	
RAS-CHEM	ECAS - Identity management Component	Reusable	Already reused	DG SANCO	
XMLGate	ECAS - Identity management Component	Reusable	Already reused	DG SANCO	
RAPEX	SANCO SAAS	Reusable	Already reused	DG SANCO	
EDSP	ECAS - Identity management Component	Reusable	Already reused	DG ENV	
Inspire	ECAS - Identity management Component	Reusable	Already reused	DG JRC	
MT@EC	ECAS - Identity management Component	Reusable	Already reused	DGT	
eDAMIS	ECAS - Identity management Component	Reusable	Already reused	DG ESTAT	

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DG MARE – Searching Reusable Identity Management Components



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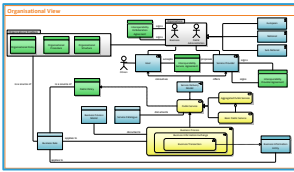
EIRA v0.9.0 beta

- Comparison to v0.8.0

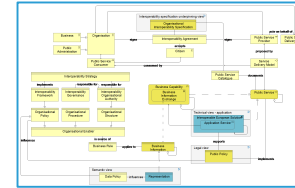


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Short overview of the latest EIRA development version



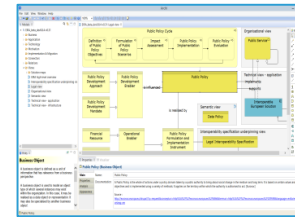
Views modelled in Visio, using some ArchiMate shapes.



Views modelled in Archi, ensuring ArchiMate compliance. HTML version.

View	Building block	Definition	Source of definition
...

Separate Excel file containing definitions.



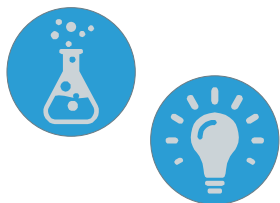
Definitions are integrated in Archi model. ADMS-compliant properties. Ability to export



Simple PowerPoint providing an introduction.



Extensive EIRA overview documentation.



Initial draft that has not been tested.



More mature version that has been tested and improved.

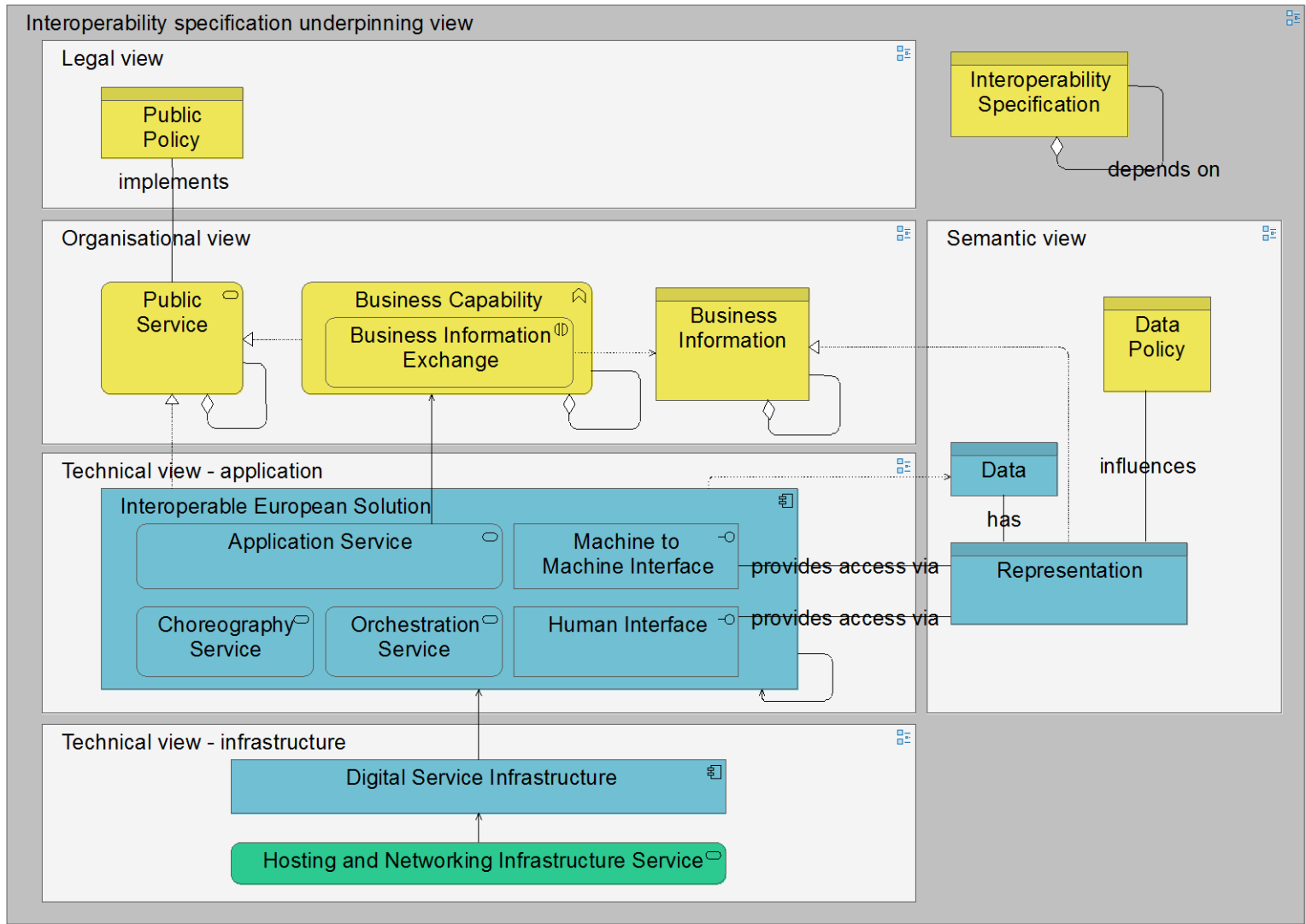
EIRA v0.9.0 beta

- High-level overview



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Short overview of the latest EIRA development version



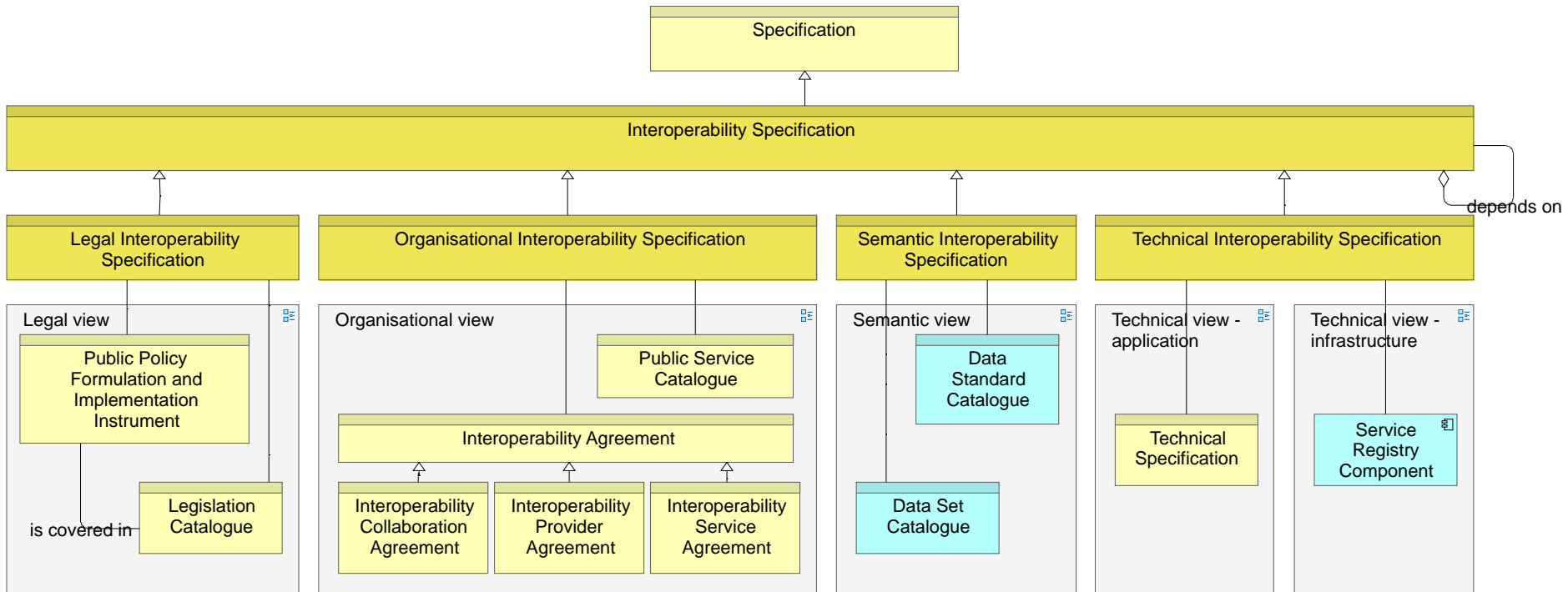
EIRA v0.9.0 beta

- IOP spec. underpinning view



01 02 03 04 05 06

Short overview of the latest EIRA development version





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Identified main functionalities of the CarTool as a result of the pilot:

1. Ability to use the EIRA as the GUI for creating search queries of solution building blocks.
2. Ability to select interoperable solution building blocks in the search query.
3. Ability to select reusable solution building blocks in the search query.
4. Ability to import solutions documented in EIRA- and ADMS-compliant Archi files.
5. Ability to export EIRA- and ADMS-compliant Archi files.
6. Ability to access a national-only Cartography of solution building blocks.
7. Ability to access a federated European Cartography of solution building blocks.

EFIR metadata staging area



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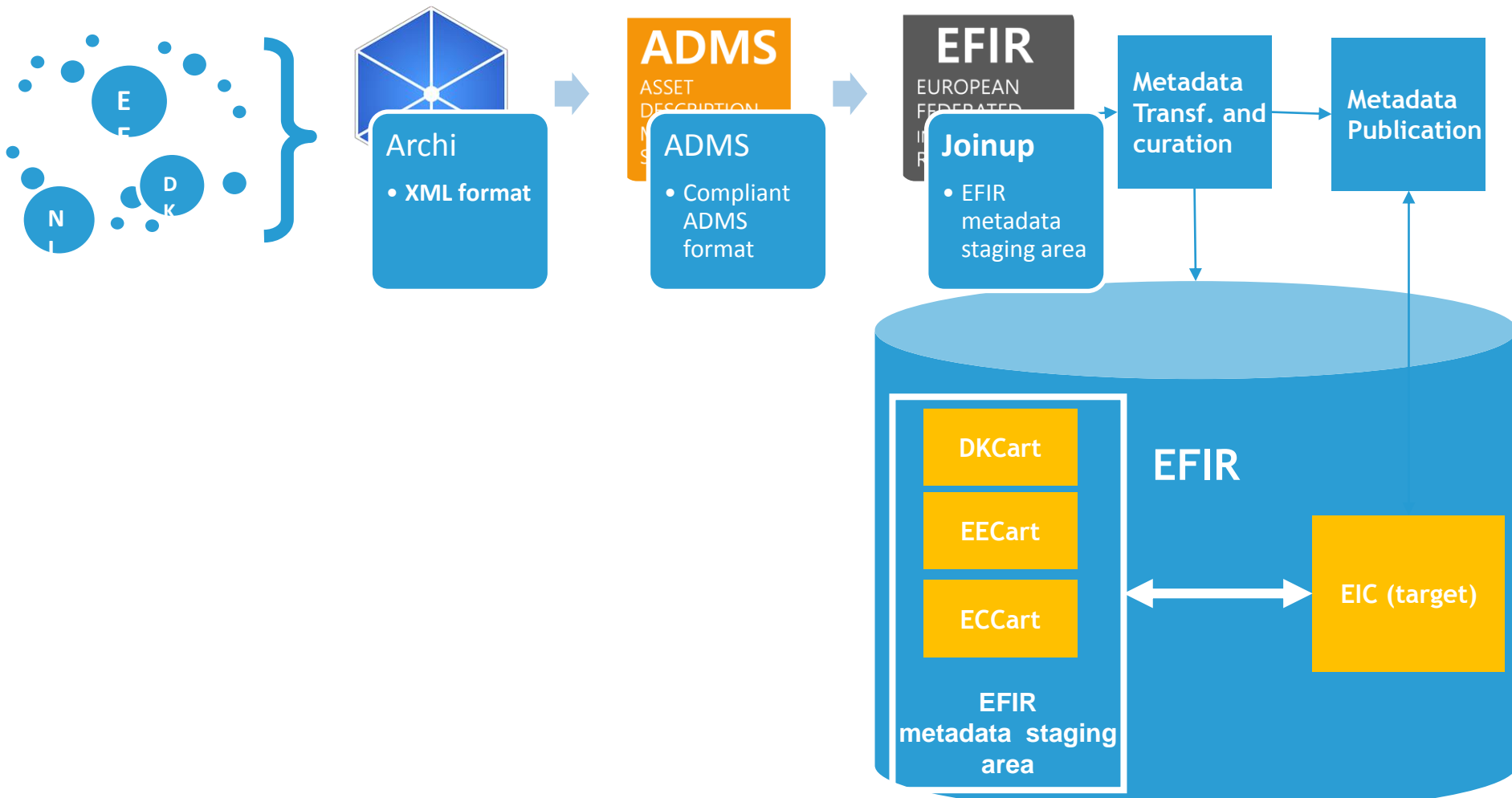
Short overview of the identified functionalities of the CarTool

MS solution architecture

1. Design in Archi

2. Export to ADMS

3. Import ADMS-AP format





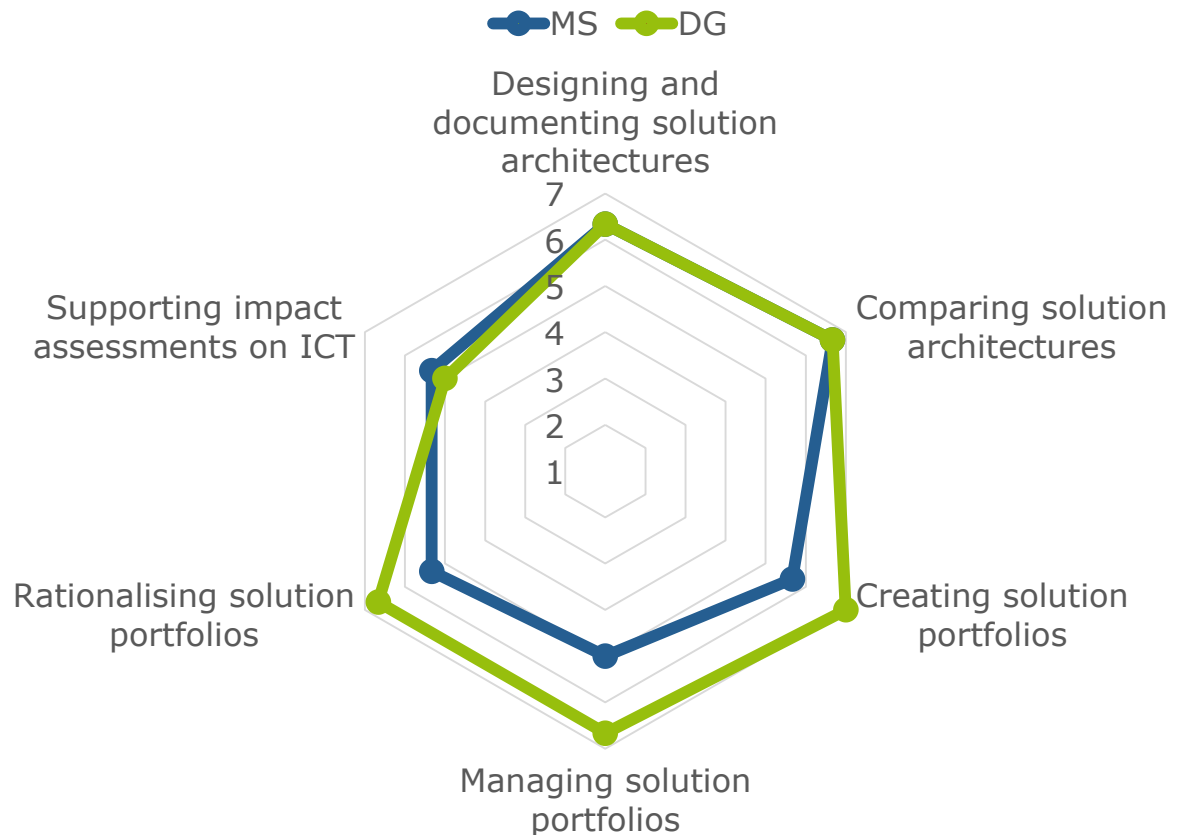
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1. The pilot participants' beliefs on the potential value of the EIRA

Scale

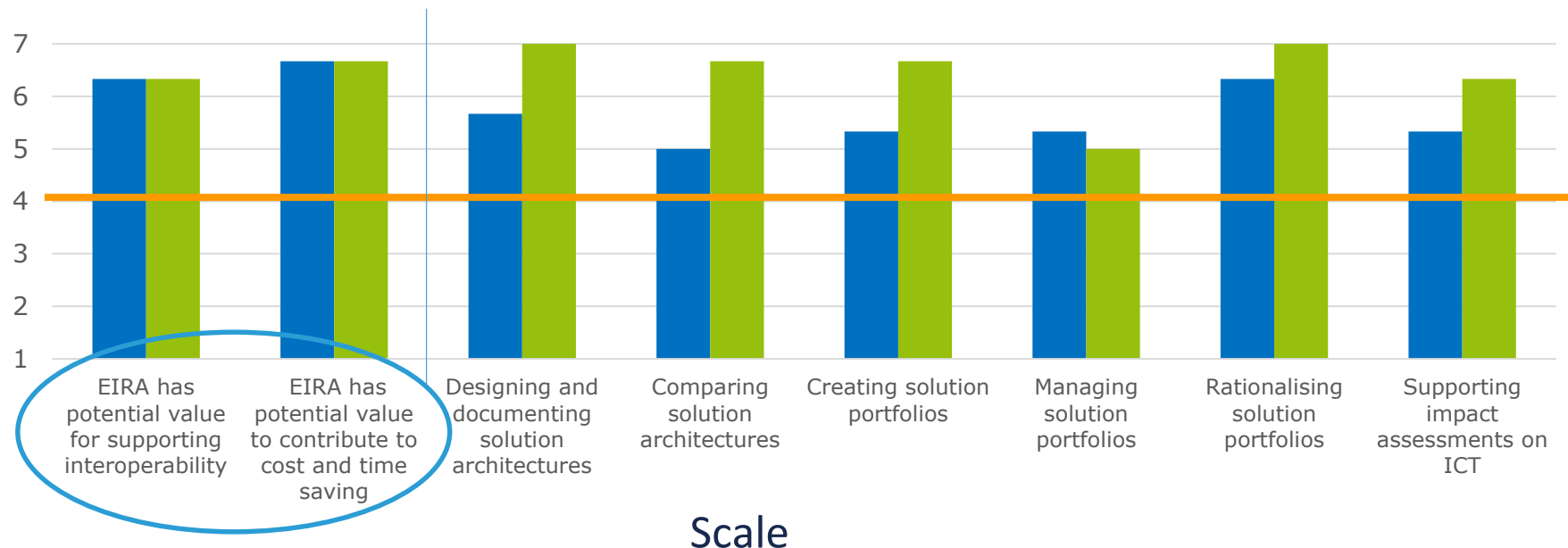
7	Strongly Agree
6	Agree
5	Somewhat agree
4	Neither agree or disagree
3	Somewhat disagree
2	Disagree
1	Strongly disagree

Based on my pilot experience, I believe that the EIRA has potential value for...



2. The pilot participants' beliefs on the potential value of the EIRA supporting interoperability and to contribute to cost and time saving (includes previous results for comparison).

Based on my pilot experience, I believe that the EIRA has potential value for... ■ MS ■ DG



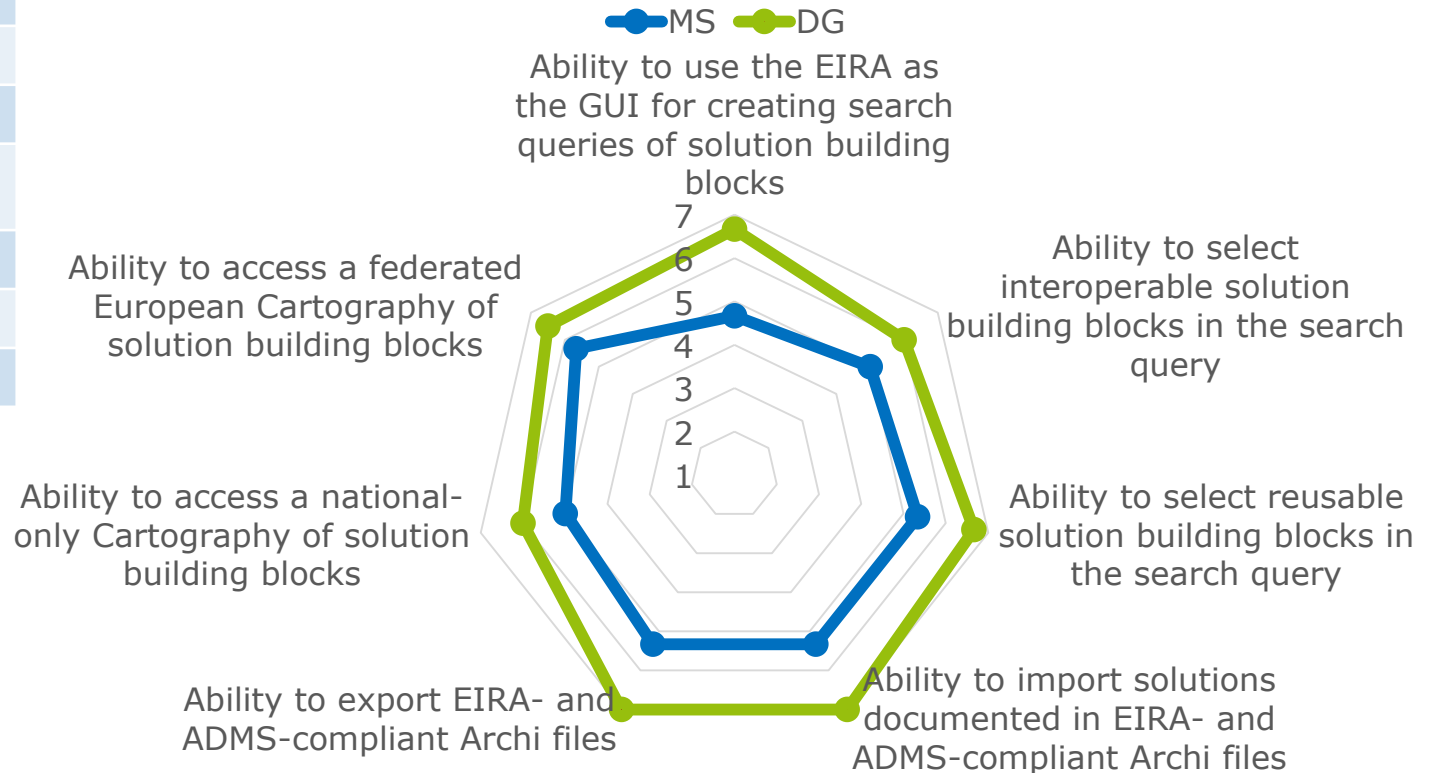
1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree

3. The pilot participants' beliefs on the potential value of the identified functionalities of the CarTool

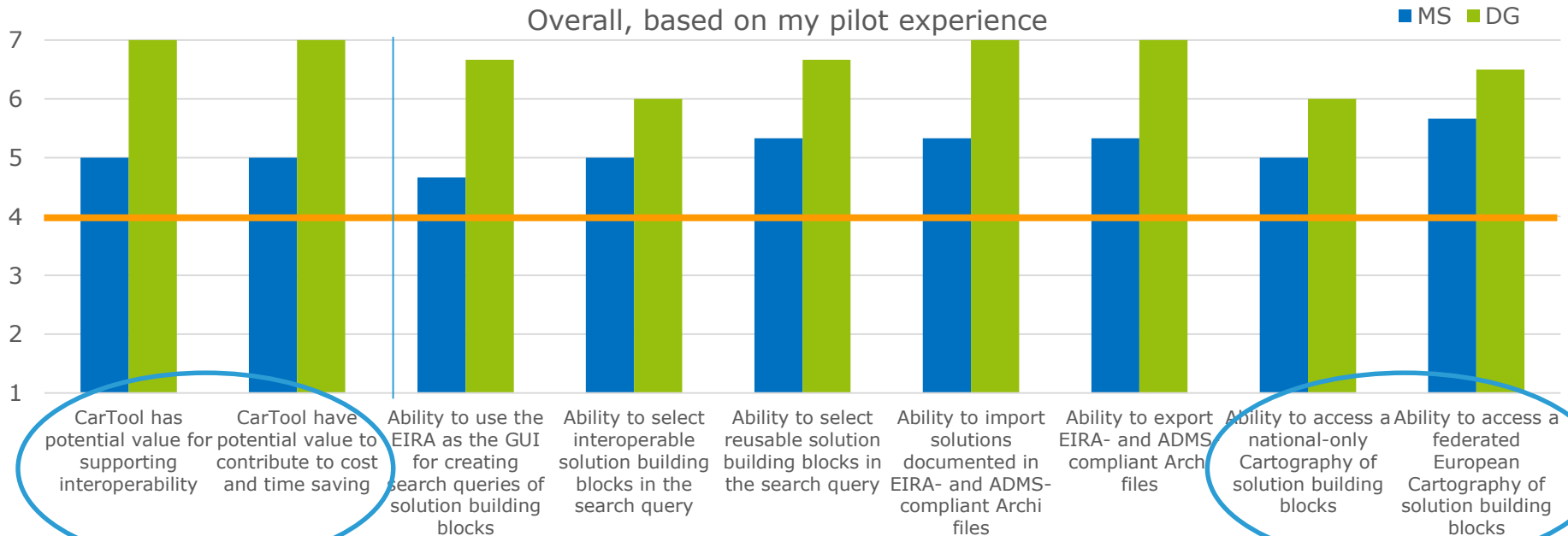
Scale

7	Strongly Agree
6	Agree
5	Somewhat agree
4	Neither agree or disagree
3	Somewhat disagree
2	Disagree
1	Strongly disagree

Based on my pilot experience, I believe that the following identified functionalities of the CarTool have potential value



4. The pilot participants' beliefs on the potential value of the EIRA and the CarTool supporting interoperability and to contribute to cost and time saving (includes previous results for comparison).



Scale

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree

The pilots have provided significant improvements to the EIRA and DK, EE, NL, DIGIT, DG Mare and e-SENS acknowledge the potential value of the EIRA

As a result the version 0.9.0 of the EIRA is ready for public consultation and later release of v 1.0

- EIRA extension for Archi,
- ArchiMate compliance and ADMS-compliant properties
- Extensive EIRA overview documentation

*“Controlled vocabulary
(e.g. for procurement)”*

*“Checklist for
core IOP ABBs”*

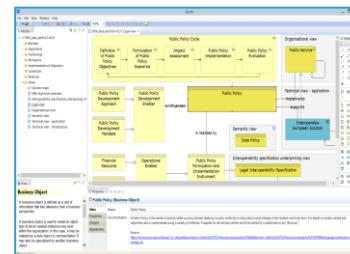
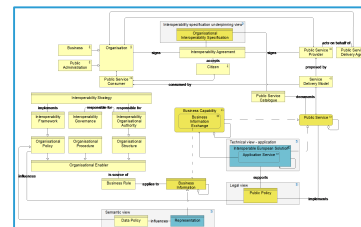
“Promotes IOP”

*“Stronger than TOGAF
with respect to IOP: 4
levels and their alignment”*

“Helps reuse”

*“Standard for
the IOP part
of solutions”*

*“Guidelines to think
about all IOP levels
when modelling”*





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1. Conduct a **public consultation** on EIRA v0.9.0 beta to be launched on June 15th for 8 weeks (any comment welcome until June 10th)
2. **EIRA v 1.0 will be released** (*October 2015*)
3. The EIRA change management process will be defined/set up in parallel. **Each MS should designate an expert.**



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Thank you



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Closing

Thank you for your time, valuable contributions and feedback!

Contact us

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EIRA

European Interoperability Reference Architecture



Cartography tool

European Interoperability Cartography



For more information

EIA Joinup community	https://joinup.ec.europa.eu/asset/eia/description
EIA project collaborative space	https://webgate.ec.europa.eu/CITnet/confluence/display/EIA/EIA+Home
ISA website	http://ec.europa.eu/isa/index_en.htm
ISA FAQ	http://ec.europa.eu/isa/faq/faq_en.htm



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ANNEX



All change request for the EIRA and the CarTool (PoC) are captured on JIRA issue tracer*.

RfC type	EIRA	CarTool (PoC)
Resolved	144	10
Open	16	60**
Total	160	70

* We can provide the analysis of change requests on request.

** The identified functionalities of the CarTool (PoC) will be implemented as Joinup Cartography services.



The EIRA v0.9.0 beta consists of the following release components:

1. **EIRA_v0.9.0_beta_ArchiMate_model.ARCHIMATE**: Archi file containing the EIRA ArchiMate model.
2. **EIRA_v0.9.0_beta_ArchiMate_model.HTML**: HTML version of the EIRA ArchiMate model.
3. **EIRA_v0.9.0_beta_Overview.PDF**: PDF document containing an introduction to the EIRA, including its key concepts, used ArchiMate notation, tool support, and views.
4. **EIRA_v0.9.0_beta_Release document set.ZIP**: Zip file containing each of the above mentioned files.
5. **EIRA_v0.9.0_beta_Release_notes.PDF**: PDF document containing the release notes.

The release components can be found in the respective release folder under the following link*: <http://joinup.ec.europa.eu/site/eia/EIRA/>

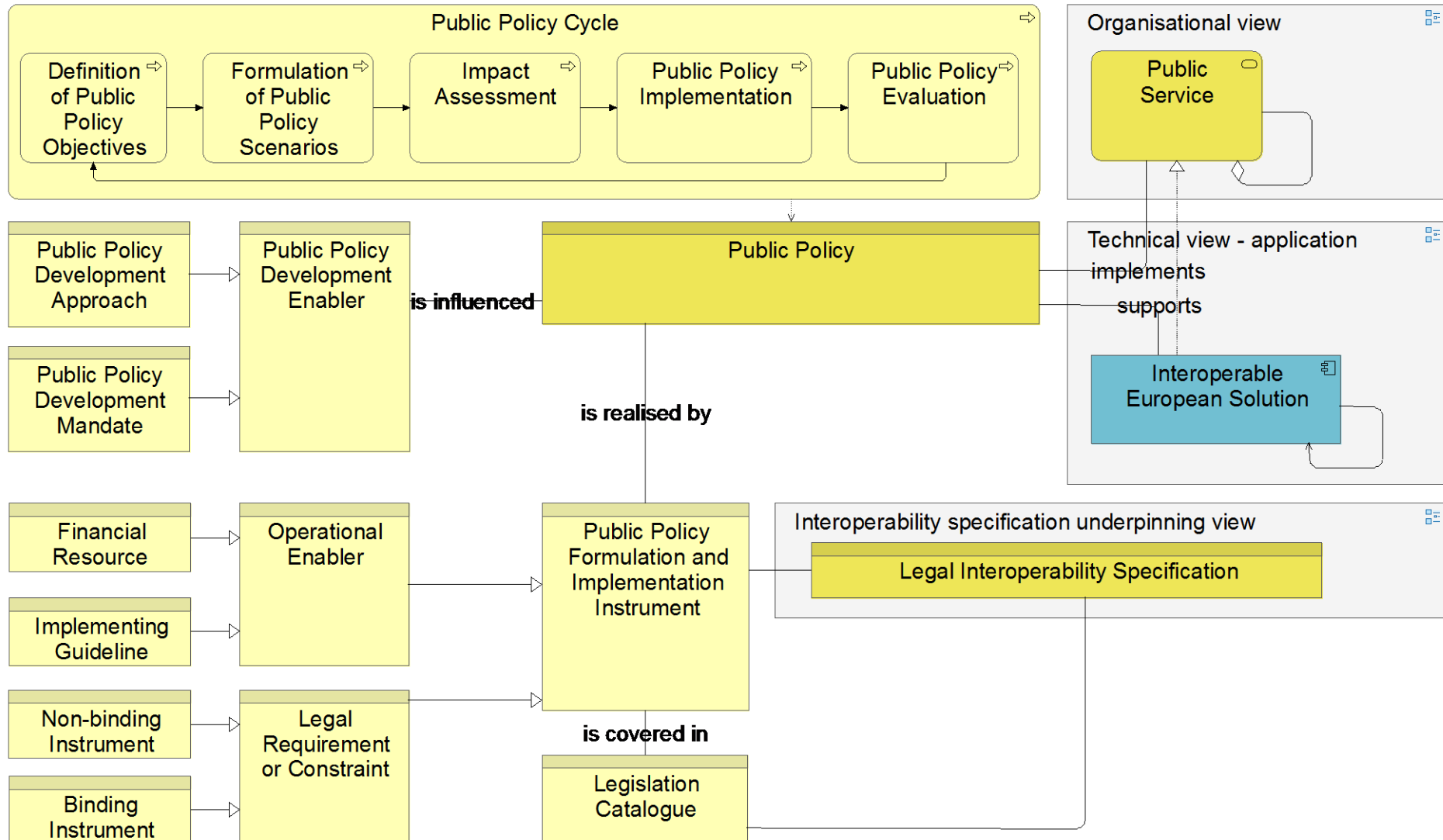
** The link points to a directory containing all EIRA releases, including the development version (e.g. 0.8.4). The development version 0.8.4 will be released as EIRA v0.9.0.*



- **ArchiMate alignment:** EIRA is aligned with ArchiMate 2.1 and its concepts and relations. Usage of Archi as a modelling tool (syntax error-free model).
- **Two new views:** EIRA high-level overview and interoperability specification underpinning view.
- **Restructuring of views:** Organisational and semantic views have been restructured. Several architecture building blocks were moved from the Technical application view to the Technical infrastructure view.
- **Improved definitions:** Definitions of architecture building blocks have been enhanced and aligned.
- **ADMS alignment:** Attributes of the building blocks are aligned with ADMS-AP properties.
- **Improved EIF alignment:** The EIRA now offers the possibility to capture how interoperability specifications are aligned to EIF principles.
- **EIRA overview document:** Provides an overview on the EIRA, including definitions of the EIRA's underlying key concepts, ArchiMate notation and modelling guidelines.
- **EIRA model for Archi and as an HTML-version:** replace the simple Visio diagrams (views) and Excel spreadsheet (ABB definitions).
- **EU regulation:** the EIRA is compliant with EU regulation.

EIRA v0.9.0 beta

- Legal view



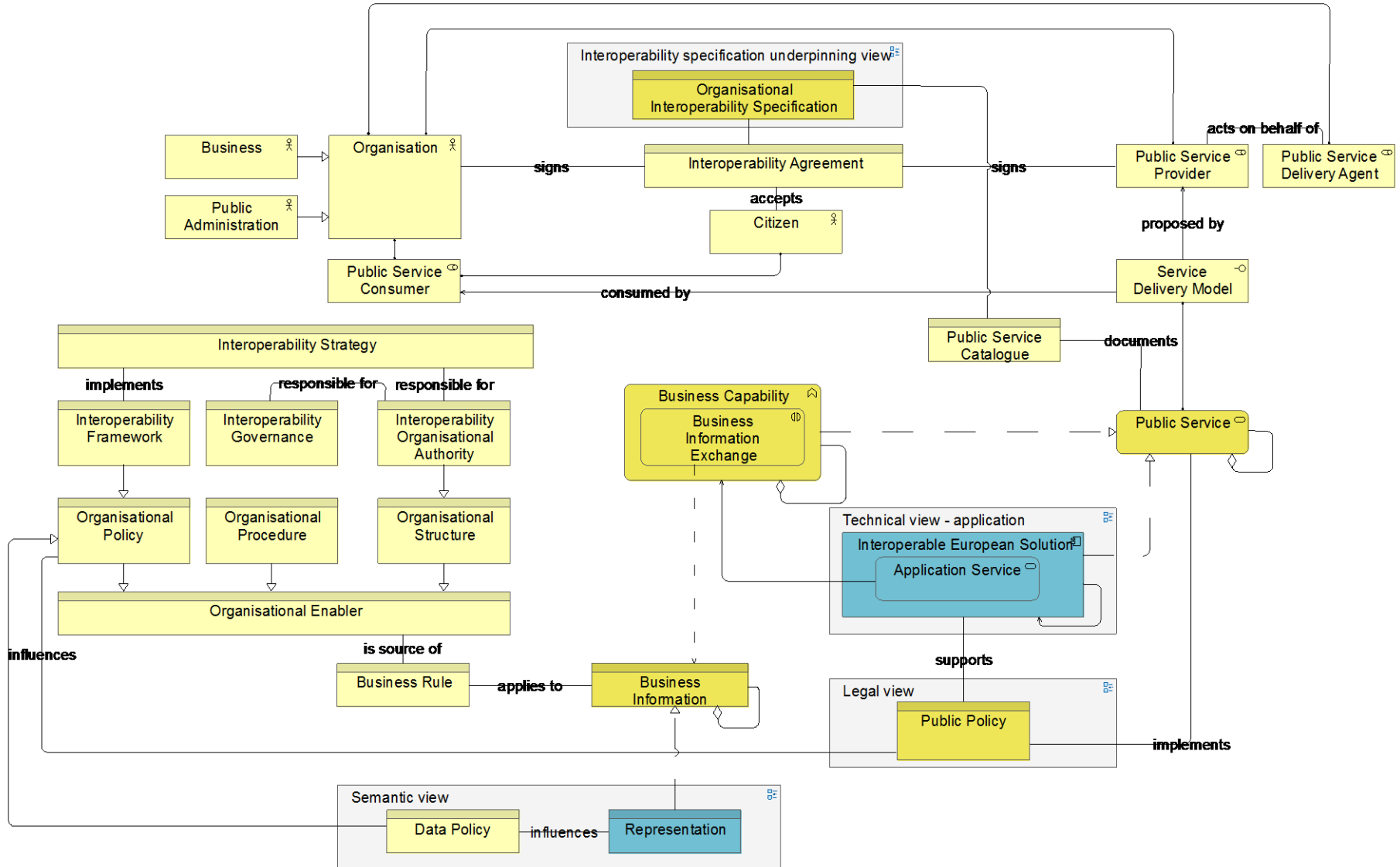
EIRA v0.9.0 beta

- Organisational view



01 02 03 04 05 06

Short overview of the latest EIRA development version



EIRA v0.9.0 beta

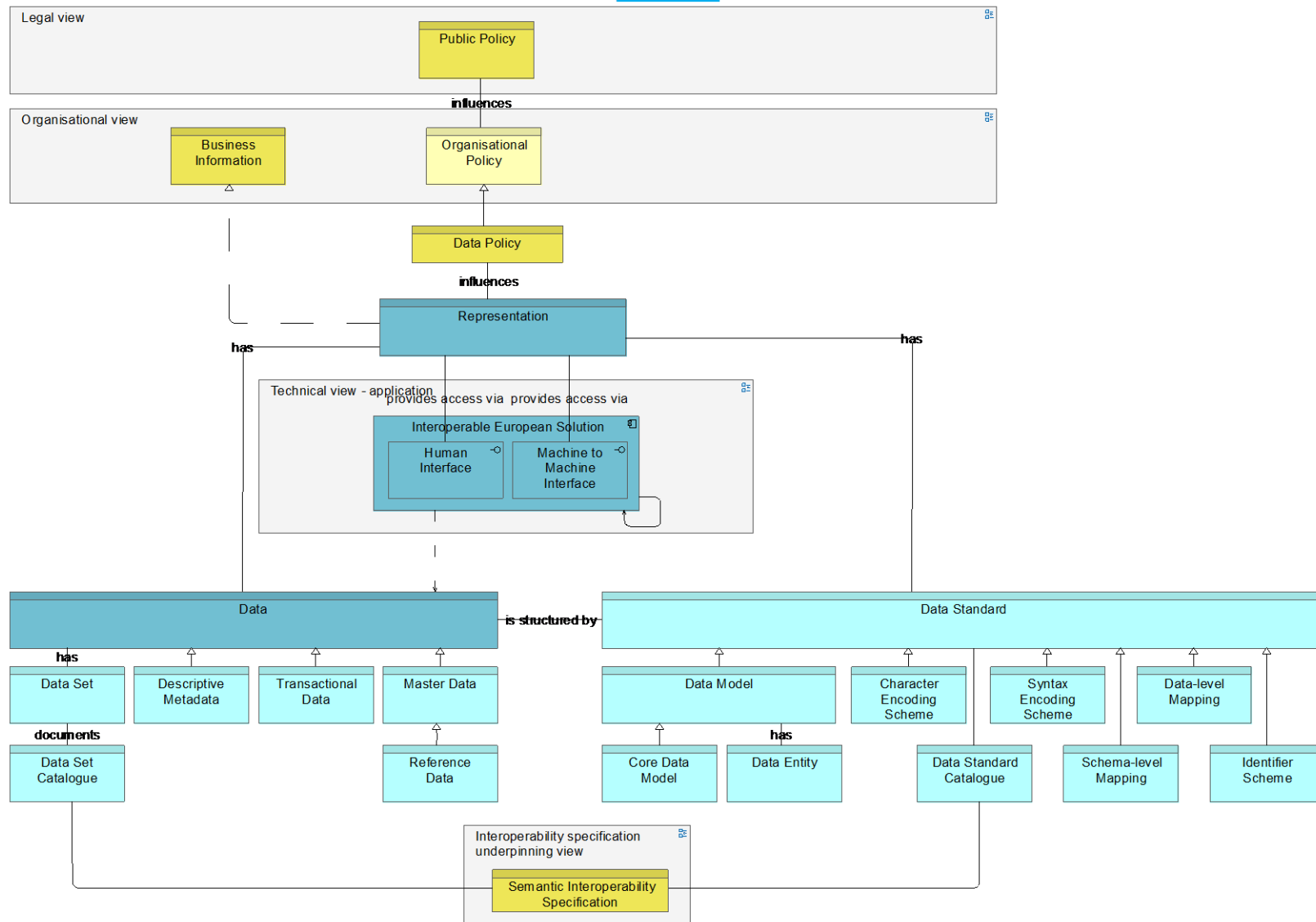
- Semantic view



European
Commission

01 02 03 04 05 06

Short overview of the latest EIRA
development version



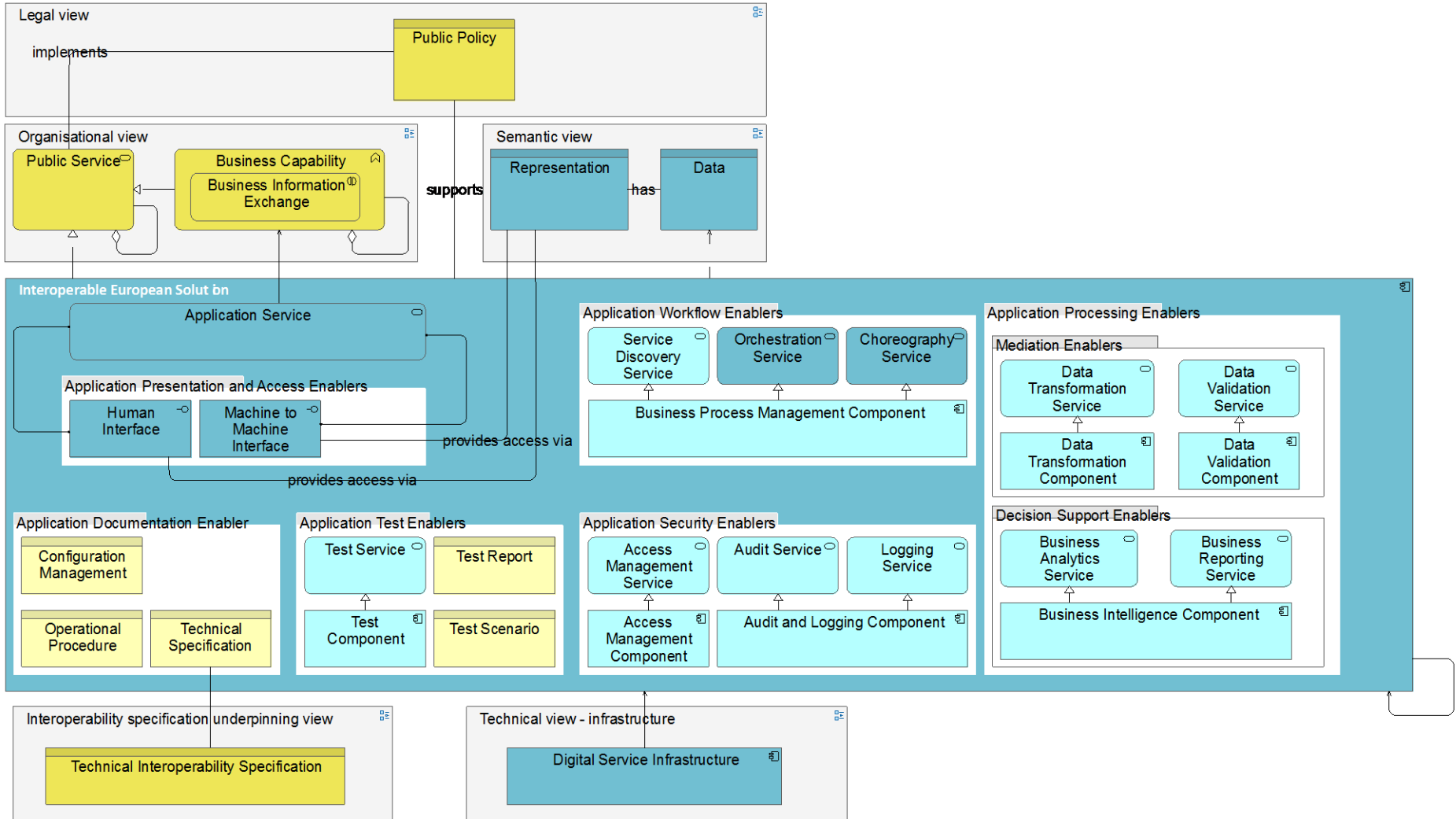
EIRA v0.9.0 beta

- Tech. application view



01 02 03 04 05 06

Short overview of the latest EIRA development version



EIRA v0.9.0 beta

- Tech. infrastructure view



01 02 03 04 05 06

Short overview of the latest EIRA development version

